

PATENT ABSTRACTS OF JAPAN

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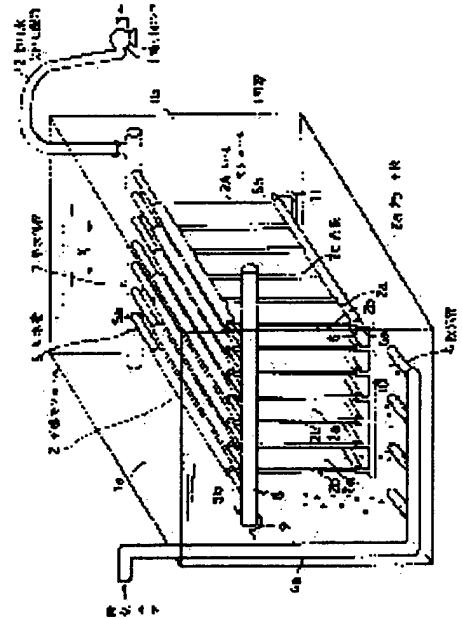
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(57)Abstract:

PURPOSE: To enhance the membrane separation efficiency, to prevent the clogging of the membrane surface due to SS, etc., and to reduce the equipment cost by hanging a flat-membrane module in a water collecting pipe in a vessel, and sucking the treated water on the discharge side of the module.

CONSTITUTION: A water collecting spacer is interposed between the flat membranes 2a and 2b, the water collecting pipe 5 pierced with many holes is provided on one end, a rod-shaped body 6 consisting of a high-density material such as a metal is furnished on the other end, the four side faces of the membrane are sealed to enclose the above-mentioned membranes, and a sealed bag-shaped module is obtained. Plural unit modules 2A thus obtained are assembled so that the membrane faces are paralleled, one end 5a of the water collecting pipe of each module 2A is connected to a water collecting header 7, and the other end 5b is connected to a shaft 8. The header 7 is moved up and down with the shaft 8 as the center of rotation, and the flat-membrane module 2 is made rotatable. The liq. to be treated in the vessel 1 (aeration tank) is aerated by an air diffusion pipe 4, and filtered by the surface of the membrane 2a and 2b. The permeated water is sucked by a suction pump 3, and discharged from a treated water discharge pipeline 12.



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